

Title (en)

Optically active compound and chiral liquid crystal composition containing the same.

Title (de)

Optisch aktive Verbindung und dieselbe enthaltende Chiral-Flüssigkristall-Zusammensetzung.

Title (fr)

Composé optiquement actif et composition de cristaux liquides chiraux contenant ledit composé.

Publication

EP 0315193 A2 19890510 (EN)

Application

EP 88118425 A 19881104

Priority

- JP 13679288 A 19880603
- JP 13679388 A 19880603
- JP 13679488 A 19880603
- JP 21463288 A 19880829
- JP 21612688 A 19880830
- JP 25543788 A 19881011
- JP 25543888 A 19881011
- JP 28045687 A 19871106
- JP 28045887 A 19871106

Abstract (en)

An optically active compound represented by the general formula (I) of: R-Z-COO-(Ph)^k-Ph(Y)-CO-(CH₂)_mC*HE L (I) In the general formula (I) R is an alkyl or alkoxy group having 4 to 22 carbon atoms; Z is the one selected from the group consisting of -Ph-, -Ph(X)-, -Ph-Ph-, Ph(X)-Ph-, -Ph-cy-, -Ph(X)-cy- and -py-Ph-; -Ph- is a 1,4-substituted phenylene group; -Ph-Ph- is a 4,4' min -substituted diphenylene group; -cy- is a trans-1,4-cyclohexane group, -py is 2,5-substituted pyrimidine group; X is a halogen atom at the ortho-position to R; k is zero or 1, Y is the one selected from the group consisting of H, OH, halogen atoms and methyl group; C* is an asymmetric carbon atom; E is the one selected from the group consisting of methyl group, halogen atoms and CF₃; L is an alkyl, aryl or aralkyl group having not more than 10 carbon atoms; and m is an integer of zero to 6 where m takes zero when Y is H and Z is -Ph- or -Ph-Ph-. The optically active compound is usable as an ingredient for a liquid crystal composition which has high spontaneous polarization, exhibits the Sc* phase (chiral smectic C liquid crystalline phase) in a wide temperature range and high speed response.

IPC 1-7

C07C 49/83; C07C 69/74; C07C 69/76; C07D 239/26; C09K 19/20; C09K 19/30; C09K 19/34

IPC 8 full level

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CPC (source: EP US)

C07D 239/26 (2013.01 - EP US); **C09K 19/2021** (2013.01 - EP US); **C09K 19/3068** (2013.01 - EP US); **C09K 19/3463** (2013.01 - EP US); **C09K 2019/0407** (2013.01 - EP US)

Citation (applicant)

- JP S6163633 A 19860401 - CHISSO CORP
- N. A. CLARK ET AL.: "Submicrosecond Bistable Electro-Optic Switching in Liquid Crystals", APPL. PHYS. LETT., vol. 36, 1980, pages 899
- J. W. GOODBY ET AL., J. AM. CHEM. SOC., vol. 108, 1986, pages 4736 - 4742
- ICHIHASHI ET AL., 13TH JAPANESE CONFERENCE ON LIQUID CRYSTALS, 16 October 1987 (1987-10-16), pages 50 - 51

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